The decline of the cash empire

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Paper cash is reaching the end of its reign

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It is indisputable that civilization is not possible without money, and *vice versa*. The meaning of money has long preoccupied rulers and their taxmen, buyers and sellers, entrepreneurs and their labourers, economists and philosophers, writers and stand-up comedians, revolutionaries and ordinary folks alike. It is universally accepted that money is a store of value, a means of payment in general and taxes in particular, a unit of account, and, more broadly, a link between the past and the future.

Yet the concept of physical money – coins and banknotes – is under attack. Heated debates about the future of cash have been fuelled by the introduction of ideas such as

bitcoin on the one hand,[1] and clumsy attempts by policy-makers to justify persistent negative interest rates on the other.

The last line of defence between us and punitive negative rates is paper currency. Yet modern technology makes it possible to abolish cash, with central banks issuing digital cash (CBDC) instead. Paper cash is reaching the end of its reign. In many societies, particularly in Scandinavia, it is already relegated to the remote corners of the economy.[2] It does not require a leap of faith to see that in a few years, central bank digital currency will replace banknotes.

With cash abolished, interest rates could be set as negative as central bankers liked; rates would be determined only by the level of prevailing economic insight in policy-making circles. In effect, punitive negative interest would be used by central banks as a powerful tool for stimulating inflation-like behaviour, as they fail to stimulate proper inflation through increased demand. The crucial difference between inflation and negative rate regimes is that cash is highly undesirable under the former, and very valuable under the latter.

However, negative rates would take us back to medieval times, when royal treasuries were practicing demurrage – the periodic recall of coins, which were reminted and returned with a fraction retained by the treasury – which served as a tax on monetary wealth, and required a massive apparatus of coercion to impose efficiently.

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Moreover, CBDC makes the execution of the celebrated Chicago Plan of 1933 (originally proposed by British economist David Ricardo in 1824) for introducing narrow or full-reserve banking – when banks hold as much central bank cash as they have deposits – entirely possible.

Both firms and ordinary citizens could have accounts directly with central banks, negating the necessity of having deposits with commercial banks, which will lose their central position in the economy and become akin to credit mutual funds. To preserve themselves,

banks can issue their own money, creating a situation where narrow banking and free banking coexist.

To understand the potential implications of narrow banking, one needs to follow the movement of money in the economy. It is best described by the monetary circuit theory, which explains how money is created and how it lubricates and facilitates the production and consumption cycles in society. It correctly reflects the mechanics of linking credit and money, emphasises the role of commercial bank as money creators and explains the limitations of central banks.

There is a lack of appreciation in mainstream economics of the special role banks play in this cycle. A vibrant economic and financial system cannot operate without banks as money creators. At the same time, the current system is unstable, complex and difficult to regulate, because banks have become heavily interconnected as a function of their lending activities. It is possible incumbent banks have outlived their usefulness, and need to morph into something more compatible with technical progress achieved in other industries.

CBDC would have obvious benefits. The absence of physical cash would partially cure societal ills, such as crime, drug trafficking and the like, or, at least, make them more difficult. It would lubricate the wheels of commerce, and help the unbanked to become participants in the digital economy, benefitting society at large. On the flip side, in a negative interest rate world, savers, pensioners, insurers who rely on fixed-income instruments would have to find some other means of fulfilling their goals – if such means exist.

While I doubt very much the feat of engineering required for central banks to issue digital cash will be achieved by using bitcoin-like technology, I do believe a clever reincarnation of David Chaum's DigiCash project – the ill-fated first stab at a digital currency based on cryptographic protocols – combined with suitable hardware, multi-party secure computation, dedicated tamper-proof satellite network, and the like, would do the trick.

CBDC has great promise, but should ideally be introduced in a very careful, thoughtful, and deliberate manner, modelling the implications before, rather than after, the fact.

[1] *Apart from its intriguing technical innovations, one could argue bitcoin does not differ that much from tally sticks used in the Middle Ages.*

[2] *Interestingly, the first banknotes in Europe were issued in Sweden, in 1661.*